David J. Chapman

Areas of Qualification

Environmental and resource economics, survey research, OPA and CERCLA damage assessment, benefit cost analysis, policy analysis, program evaluation

Employment History

- Principal, Stratus Consulting Inc., Boulder, CO, 2006-present; Managing Economist, 2003-2006
- Chief, Pacific Coast Branch, Damage Assessment Center, NOAA, 2000-2003; Acting Chief, 1999-2000
- Economist, Damage Assessment Center, NOAA, 1993-1999
- Consultant, California Department of Fish and Game, 1992-1993
- Consultant, Foster Associates, San Francisco, CA, 1992
- Consultant, State of California Department of Fish and Game, 1990-1993
- Research Consultant, NRDA Inc., San Diego, CA, 1989-1992
- Research Consultant, Minerals Management Service/University of Washington, Department of Forestry, 1989
- Research Consultant to Dr. W. Michael Hanemann (UC Berkeley), 1985-1986
- Graduate Student Instructor, University of California Berkeley, 1985-1991

Education

- University of California, Berkeley, MS, Natural Resource Economics, 1985
- University of California, Irvine, BA, Economics, 1983

Professional Experience

Mr. Chapman has 25 years of experience in natural resource valuation and policy analysis, specializing in behavioral and welfare effects of environmental and natural resource impacts and federal and state environmental policy. He is experienced in the technical development and implementation of non-market valuation studies to measure the welfare effects of environmental contamination. In addition, Mr. Chapman has coordinated the development and evaluation of federal and state environmental policies and assisted in the development of federal regulations. He has over 10 years of experience working in the federal government conducting natural resource damage assessments (NRDAs), policy evaluation, and regulation development.



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At Stratus Consulting, Mr. Chapman leads NRDA projects for both state and federal clients; is leading projects on non-market valuation studies including the valuation of groundwater, freshwater river systems, coral reefs, right whales, and improved weather information; and has worked on the conceptual and empirical estimates of the value of water for the American Water Works Research Foundation.

As Pacific Branch Chief for NOAA's Damage Assessment Center, Mr. Chapman's responsibilities covered the region from Alaska to California, and the Pacific Islands. He was responsible for the overall management of all scientific and economic studies conducted in support of multiple NRDAs for oil spills and toxic waste sites. Activities included spill response coordination, case strategy, technical assessment guidance, quality assurance, and management of eight technical and administrative staff members. Activities also included the role of senior economist on NOAA research projects.

Mr. Chapman served as the lead NOAA economist on over 20 NRDAs, as well as methods development and training of in-house and state and federal agency personnel on economic methods.

Mr. Chapman's experience includes the following:

- Developed non-market valuation studies to determine the value of protecting and improving, groundwater resources, freshwater river systems, Hawaiian coral reef ecosystems, improved protection of north Atlantic right whales, and improved weather forecasts.
- Served as an expert witness to the U.S. Department of Justice and Coeur d'Alene Tribe on the Coeur d'Alene Idaho NRDA.
- Provided guidance to the European Commission, Spain, and Portugal on NRDA methods and application for implementation of the European Union Environmental Liabilities Directive.
- Provided technical guidance and review on the application of habitat equivalency analysis (HEA) and non-market valuation studies used to develop environmental damage compensation claims resulting from the 1991 Gulf War and evaluated by the United Nations Compensation Commission.
- Developed program evaluation and tracking tools for NOAA.
- Served as an expert witness to the California Department of Fish and Game on oil spill valuation, and supported the California Office of Attorney General to measure recreation

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losses resulting from the *American Trader* oil spill, including depositing and testifying at trial (1997).

- Served as an expert consultant on the *Avila Beach* oil spill NRDA responsible for data collection on response to spill and human use of site, development of assessment research plan, implementation of assessment, and authoring expert report, and participated in settlement negotiations.
- Provided economic analysis on consultant projects dealing with industrial and commercial sector water conservation practices, and measuring economic impact of proposed Bay Area Rapid Transit extension through the City of Fremont, California.
- Developed fair market valuation study for fiber optic cable right of way through National Marine Sanctuaries.
- Supported economic damage assessment for the Exxon Valdez oil spill NRDA.
- Developed economic analysis to estimate the impact of oil and gas development along the Oregon and Washington coasts, including development of a contingent valuation survey.
- Supported economic impact of proposed agricultural wastewater discharges into the San Joaquin River, recreational assessment for the albacore sport fishing economic and marine recreational fishing studies.

Selected Articles/Chapters/Reports

Lane, D., K. Carney, and D. Chapman, In Press. "Identifying, Scaling, and Evaluating Groundwater Restoration Projects as Compensation for Groundwater Injuries." *International Journal of Soil, Sediment and Water: Documenting the Cutting Edge of Environmental Stewardship.*

Adamowicz, V., D. Chapman, G. Mancini, W. Munns, G. Striling, and T. Tomasi. "Valuation Methods" chapter in *Valuation of Ecological Resources: Integration of Ecological Risk Assessment and Socio-economics to Support Environmental Decisions*, R.G. Stahl, L. Kapustka, W. Munns, and R. Bruins (eds.). SETAC Press, Pensacola, FL. 2007.

Allen II, P.D., D.J. Chapman, and D. Lane. 2005. "Scaling Environmental Restoration to Offset Injury using Habitat Equivalency Analysis." Chapter 8 in *Economics and Ecological Risk Assessment, Applications to Watershed Management*, R.J.F. Bruins and M.T. Heberling (eds.). CRC Press, Boca Raton, FL, pp. 165-184.

Chapman, D. and B. Julius. 2005. "The Use of Preventative Projects as Compensatory Restoration." *Journal of Coastal Research* SI(40):120-131.

Chapman D. and W.M. Hanemann. 2001. "Environmental Damages in Court: The American Trader Case." The Law and Economics of the Environment, Anthony Heyes (ed.), pp. 319-367.

Chapman, D. and E. English. 2001. "Fair Market Value Analysis for a Fiber Optic Cable Permit in National Marine Sanctuaries." Report to National Marine Sanctuary Program, National Oceanic and Atmospheric Administration, Silver Spring, MD.

Chapman, D., N. Iadanza, and T. Penn. 1998. "Calculating Resource Compensation: An Application of the Service-to-Service Approach to the Blackbird Mine Hazardous Waste Site." National Oceanic and Atmospheric Administration Damage Assessment and Restoration Program Technical Paper 97-1. October.

Chapman, D., W.M. Hanemann, and P. Ruud. 1998. "American Trader Oil Spill: A View from the Beaches." Featured Essay in AERE Newsletter 18(2).

Chapman, D. and W.M. Hanemann. 1999. "Non-Market Valuation Using Contingent Behavior: Model Specification and Consistency Tests." In *Proceeding of the 1996 Annual AERE Workshop*, Tahoe City, CA. June.

Kanninen, B., D. Chapman, and W.M. Hanemann. 1992. "Survey Data Collection; Detecting and Correcting for Biases in Responses to Mail and Telephone Surveys." In *Proceedings of the U.S. Census Bureau's Annual Research Conference*.

Ellis, G., D. Chapman, and N. Johnson. 1991. "Assessing the Economic Impact to Coastal Recreation and Tourism from Oil and Gas Development in the Oregon and Washington Outer Continental Shelf." OCS Study MMS 91-0046. May.

Hanemann, M., E. Lichtenberg, D. Zilberman, D. Chapman, L. Dixon, G. Ellis, and J. Hukkinen. 1987. "Economic Implications of Regulating Agricultural Drainage to the San Joaquin River. Regulation of Agricultural Drainage to the San Joaquin River." SWRCB Order No. W.Q. 85-1, Technical Committee Report. Appendix G (two vols.). State Water Resources Control Board, Sacramento, California.

Presentations/Short Courses/Working Papers

Workshop on Resource Equivalency Methods for the E.U. Environmental Liabilities Directive. Instructor. Warsaw, Poland, June 2-3, 2008.

- "The European Union Environmental Liabilities Directive: Resource Compensation Methods Measure Remediation Scaling under Annex II." Presentation to the European Commission. Brussels Belgium, March 2008.
- "The European Union Environmental Liabilities Directive: Resource Compensation Methods Measure Remediation Scaling under Annex II:" Invited Presentation. Sevilla, Spain February, 2008.
- "Nonparametric Modeling of Travel Cost Data," paper presented at the First World Congress of Environmental and Resource Economists, (with W. Michael Hanemann and Michael Ward) Venice, Italy, June 25-27, 1998.
- "The Role of Value and Economic Efficiency in Habitat Equivalency Analysis." Interactive Platform Session. Fourth SETAC World Congress, Portland, OR. November 2004.
- "Introduction to Natural Resource Damage Assessment and Restoration-Based Compensation for Environmental Damages" Short Course. European Society for Environmental Toxicologists and Chemists (European SETAC). Prague, Czech Republic, April 2004.
- "Use of Resource Equivalency in Natural Resource Damage Assessments." Presentation to U.S. Environmental Protection Agency, Science Advisory Board. April 2004, Washington, D.C.
- "Use of Economic Valuation to Establish Compensation under the E.C. on Environmental Liability Directive." Envecon 2004 Applied Environmental Economics Conference, London, UK. March 2004.
- "What Lies Beneath: Valuing Public Lands Leases, Including Sovereign Submerged Lands." 2003 National Public Land Acquisition & Management Partnership Conference, Amelia Island, Florida. December 6-9, 2003.
- "The Use of Preventative Projects as Compensatory Restoration." Restore America's Estuaries Conference, Baltimore, MD. April 2003.
- "Developing Defensible NRDA Claims" Short Course. International Oil Spill Conference. Vancouver, British Columbia, Canada. April 2003.
- "Non-Market Valuation Techniques in Natural Resource Damage Assessments." Invited Lecture Series. Department of Economics, College of William and Mary, Williamsburg, VA. Spring 2003.

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"NOAA's Blue Ribbon Panel: 10 Years After" Invited Panelist. Resources for the Future, Washington, D.C. November 2002.

"Cooperative NRDA Assessments" Short Course. International Oil Spill Conference, Tampa Bay. March 2001.

"The Role of Natural Resource Economics in the *American Trader* Oil Spill Trial." Invited speaker at the Yosemite Law Institute, Yosemite, CA. October 1998.

"Using Economics in the Courts." Presentation to the Southern Economic Association Meeting, Baltimore, MD. October 1998.

"Use of Habitat Equivalency Analysis in Natural Resource Damage Assessments." Presentation to the Joint Assessment Team, Portland, OR. June 1996.

"Non-Market Valuation Using Contingent Behavior: Model Specification and Consistency Tests." Presented at the 1996 Annual AERE Workshop, Tahoe City, CA. June 1996.

"Resource Compensation: An Application of Northwest Salmon." Presented at the W-133 Annual Meetings, Jekyll Island, GA. March 1996.

"Natural Resource Economics." Presented to the Natural Resource Damage Assessment and Restoration Workshop, Sponsored by USFWS. April 1994.

Chapman, D., and W.M. Hanemann. "Correlated Discrete-Response Contingent Valuation." Department of Agricultural and Resource Economics, Working Paper, University of California, Berkeley. July 1993.

Hanemann, W.M., D. Chapman, and B. Kanninen. "Non-Market Valuation Using Contingent Behavior: Model Specification and Consistency Tests." Department of Agricultural and Resource Economics, Working Paper, University of California, Berkeley. January 1993.

"Survey Data Collection: Detecting and Correcting for Biases in Responses to Mail and Telephone Surveys" (co-authored with B. Kanninen). Presented at the United States Census Bureau's Conference on Statistical Methods, Washington D.C. March 1992.

"Empirical Uses of Contingent Valuation Studies in Natural Resource Damage Assessments." Presented to Department of Forestry, University of Washington. July 1989.

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Hanemann, W.M. and D. Chapman. "Beyond Contingent Valuation: Deriving Environmental Benefits from Hypothetical Data." Department of Agricultural and Resource Economics, Working Paper, University of California, Berkeley. October 1988.

"Beyond Contingent Valuation: Deriving Environmental Benefits from Hypothetical Behavior Data" (co-authored with W.M. Hanemann). Presented at the American Public Policy Association Meeting, Washington, D.C. October 29, 1987.

Litigation Experience/Testimony

Coeur d'Alene Natural Resource Damage Assessment. Expert report preparation and deposition testimony in the matter of United States of America v. ASARCO Inc. et al. No CV96-0122-N-EJL. (2005)

Montrose Superfund Site Natural Resource Damage Assessment, 2000. Expert witness preparation and deposition support.

American Trader Oil Spill, 1990. Expert witness, report development, and deposition and trial testimony.

Specific Training

NOAA Facilitation and Mediation Training Workshop, June 1998.

Advanced Quantitative Marketing Methods, Haas Business School, University of California, Berkeley, July 30-August 1, 1997.

Stated Preference Short Course, Portland State University. June 24-27, 1996.

Qualitative Choice Methods Workshop, University of California, Berkeley, May 4-8, 1992.